



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,643	10/22/2003	Seiji Sakaki	61282-040	4048

7590 01/17/2006

McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

LEE, CHUN KUAN

ART UNIT	PAPER NUMBER
----------	--------------

2181

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,643

Applicant(s)

SAKAKI, SEIJI

Examiner

Chun-Kuan (Mike) Lee

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

1. The cancellation of claim 13 is acknowledged; claims 1-12 are pending and amendments made to the specification and Figure 5 are accepted.
2. Applicant's arguments regarding the rejection to claims 1, 2, 4, 6-9 and 11 under 35 U.S.C. § 102 by Overtom et al. have fully been considered but is not found to be persuasive, please view the rejection to claims 1, 2, 4, 6-9 and 11 as discussed below.
3. Applicant's arguments regarding the rejection to claims 3, 5 and 10 under 35 U.S.C. § 103(a) have fully been considered but is not found to be persuasive, as claims 3, 5 and 10 are dependent on claim 1 and therefore are unpatentable at least because they include all the limitations recited in claim 1. Please view the rejection to claims 3, 5 and 10 as discussed below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2181

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-2, 4, 6-9 and 11-12 rejected under 35 U.S.C. 102(e) as being anticipated by Overtoom et al. (U.S. Patent 6,732,218).

4. As per claims 1 and 12, Overtoom teaches a USB (Universal Serial Bus) unit control method having a computer program, wherein, when coupling a plurality of USB units (Fig.1 ref 106, 108, 110) including a dual-role device (Fig. 1 ref 108) having a USB device function or a USB host function via a hub (Fig. 1 ref 102) (col. 1, ll. 50-60; col. 2, l. 55 to col. 3, l. 20), said method determines the function of said dual-role device assumed when it is connected, records information (information is stored during the initialization process) indicating the function determined (col. 3, l. 55 to col. 4, l. 64), and switches the function of said dual-role device from the USB host function to the USB device function or from the USB device function to the USB host function (col. 3, l. 55 to col. 4, l. 64 and col. 5, ll. 8-16), and said method compares (reconfigure by comparing which external devices are HNP capable and the reception from a device a request for USB bus) the information with a change in the state of D+ of a USB data line to which the dual-role device is connected, and based on the comparison is capable of switching the function of the dual-role device from the USB host function to the USB device function or from the USB device function to the USB host function (col. 3, l. 55 to col. 4, l. 59 and col. 5, ll. 8-16), wherein the disconnection of the pull-up resistor from the D+ data line results in the change of the state on the D+ data line (col. 4, ll. 11-59).

5. As per claim 2, Overtoom teaches a USB unit control method, wherein, in case a dual-role device acting in accordance with the USB host function is connected to a hub where a USB host (personal computer 114 of Fig. 1) is connected, said method makes a switchover of the function of said dual-role device to a USB device function, and reports said switchover to said USB host (col. 3, l. 2 to col. 4, l. 59).

6. As per claim 4, Overtoom teaches a USB unit control method, wherein, in case a USB host (Fig.1 ref 114) is connected to a hub (Fig. 1 ref 102) via a four-wire USB cable, said method makes a switchover of the function all dual-role devices connected to said hub each to act in accordance with the USB device function, and reports said switchover to said USB host (col. 1, l. 61 to col. 2, l. 6 and col. 3, l. 21 to col. 4, l. 59).

7. As per claim 6, Overtoom teaches a USB unit control method, wherein said method determines the function of said dual-role device assumed when it is connected based on the state of a port where said dual-role device is connected or change in the state of D+ of a USB data line (col. 4, ll. 11-59), and makes a switchover of the function of said dual-role device devices from the USB host function to the USB device function or from the USB device function to the USB host function (col. 4, ll. 46-60).

8. As per claim 7, Overtoom teaches a USB unit control method, wherein said method detects a specific request from a USB host connected to a hub and makes a

Art Unit: 2181

switchover of the function of a plurality of dual-role devices from the USB host function to the USB device function or from the USB device function to the USB host function, (col. 4, ll. 11-59).

9. As per claim 8, Overtoom teaches a USB unit controller wherein said USB unit controller (USB host and peripheral controllers 208, 210 of Fig. 2) executes a USB unit control method according any one of claims 1 to 7 (col. 3, l. 40 to col. 4, l. 45).

10. As per claim 9, Overtoom teaches a USB unit controller, wherein said USB unit controller comprises a hub (Fig. 1 ref 102 and Fig. 2 ref 102) for coupling a plurality of USB devices (Fig. 1, ref 106, 108, 110) including a dual-role device (Fig 1, ref 108) acting in accordance with the USB device function or the USB host function (col. 2, l. 55 to col. 4, l. 45), device control means for determining the function of said dual-role device assumed when it is connected (col. 4, ll. 11-60), and bus management means for making a switchover of the function of said dual-role device connected to said hub devices from the USB host function to the USB device function or from the USB device function to the USB host function (col. 3, l. 40 to col. 4, l. 59).

11. As per claim 11, Overtoom teaches a USB unit controller comprises at least one receptacle (Fig. 2 ref 202, 204) for a USB cable defined in the OTG Supplementary Specifications and functions as a USB hub (col. 1, l. 61 to col. 3, l. 20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Overtoom et al. (US Patent 6,732,218) in view of the "On-The-Go Supplement to the USB 2.0 specification, Revision 1.0".

Overtoom teaches all the limitations of claims 1 and 9 as discussed above, Overtoom further teaches the USB unit control method comprising wherein said device control means comprises a function for performing communications between a USB host and a USB device (col. 3, l. 55 to col. 4, l. 60); a function for performing data communications (col. 2, l. 64 to col. 3, l. 3); and executing the Host Negotiation Protocol (col. 3, ll. 59 to col. 4, l. 19).

Overtoom does not teach specifically the "Session Request Protocol" and the detection and starting or enabling of this protocol.

"On-The-Go Supplement to the USB 2.0 specification, Revision 1.0" teaches the specifications related to "Session Request Protocol" (SRP) for USB 2.0 (sections 5.3-5.4, pages 37-42). Specifically defining the two methods, "data-line pulsing" and "Vbus pulsing", which comprise the "Session Request Protocol", stating that "dual-role device are required to be able to initiate and respond to SRP" (section 5.3.1, page 37) and that

Art Unit: 2181

one of the required features for dual-role device is Session Request Protocol (section 3.2, page 5).

Therefore, it would have been obvious to one of ordinary skill in this art, at the time of invention was made to modify Overtoom to include the SRP and the detection and starting or enabling of SRP, as taught by "On-The-Go Supplement to the USB 2.0 specification, Revision 1.0", because Overtoom's USB unit control method conforms to the USB OTG standard (Overtoom, col. 2, ll. 55-67).

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Overtoom et al. (US Patent 6,732,218) in view of McCauley (US Patent 6,263,392).

Overtoom teaches all the limitations of claim 1 as discussed above. Overtoom further teaches the USB unit control method comprising interconnection of USB devices using a USB cable.

Overtoom does not teach specifically the interface control between the USB device and USB host when the USB device is connected via a USB cable to a USB host and reporting the connection of said USB device to said USB host.

McCauley teaches the interface control between the USB device and USB host when the USB device is connected to a USB host and reporting the connection of said USB device to said USB host (Claim 1 and col. 10, ll. 37-67).

Therefore, it would have been obvious to one of ordinary skill in this art, at the time of invention was made to modify Overtoom to include the interface control between the USB device and USB host when the USB device is connected to a USB host and

Art Unit: 2181

reporting the connection of said USB device to said USB host, as taught by McCauley, because doing so would further add and expand Overtoom's USB unit control method, such as provide an energy efficient and low cost interface between multiple peripheral to a host (McCauley, col. 2, ll. 34-62).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671 and email is chunkuan.lee@uspto.gov. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huynh Kim Ngoc (Kim) can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature of relating to the status of this application

Art Unit: 2181

should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Mailed responses to this action should be sent to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231.

Faxes for Official/formal (After Final) communications or for informal or draft communications (please label "PROPOSED" or "DRAFT") sent to:

(571) 273-8300


Hand-delivered responses should be brought to:

USTPO, Randolph Building, Customer Service Window

401 Dulany Street

Alexandria, VA 22314

C.K.L.
01/10/2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER
1/10/06